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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-----------------|-------------|----------------------|---------------------|------------------|
| 10/602,818 | 06/25/2003 | Vidhu J. Nagpal | 1778A1 | 9488 |

7590 03/28/2007
PPG Industries, Inc.
Law-Intellectual Property-39SW
One PPG Place
Pittsburgh, PA 15272

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| EXAMINER |
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KOPEC, MARK T

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| ART UNIT | PAPER NUMBER |
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1751

| SHORTENED STATUTORY PERIOD OF RESPONSE | MAIL DATE | DELIVERY MODE |
|--|------------|---------------|
| 3 MONTHS | 03/28/2007 | PAPER |

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

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|------------------------------|--------------------------------------|--------------------------------------|--|
| Office Action Summary | Application No. 10/602,818 | Applicant(s) NAGPAL ET AL. | |
| | Examiner Mark Kopec | Art Unit 1751 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 01/16/07.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-5, 7-14, 16-21, 25, 26, 31-35, 37, 39-44, 46-53, 55-60, 65 and 66 is/are pending in the application.
- 4a) Of the above claim(s) 7, 8, 16-21, 31-35, 37, 39, 46, 47 and 55-60 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-5, 9-14, 25, 26, 40-44, 48-53, 65 and 66 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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This action is responsive to applicant's amendment filed 01/16/07. Claims 1-5, 7-14, 16-21, 25, 26, 31-35, 37, 39-44, 46-53, 55-60, 65 and 66 pending.

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 01/16/07 has been entered.

The election of species requirement mailed 10/11/05 is maintained. It is noted that applicant has amended claim 1 to remove (elected species) oxides from the claims. Accordingly, non-elected species sulfides have been examined. Claims 7, 8, 16-21, 31-35, 37, 39, 46, 47 and 55-60 remain withdrawn from consideration. An action on the elected species follows.

The prior art rejection over Selvig is withdrawn in view of applicant's amendment and remarks.

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1-5, 9-14, 25, 40-44, 48-53, 65 and 66 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative,

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under 35 U.S.C. 103(a) as obvious over Schmidt et al
(5,910,522).

Schmidt discloses composite adhesive for optical and opto-electronic applications contains the following: a) transparent polymers and/or polymerizable oligomers and/or monomers suitable for use as adhesive, b) nanoscale inorganic particles, c) optionally, compounds for the surface modification of said inorganic particles, and d) optionally, a crosslinking initiator. The composite adhesive is suitable for connecting individual components of optical or opto-electronic elements and for constructing such elements (Abstract). Suitable transparent polymers include polycarbonates (Col 3, lines 48-49), and Schmidt teaches 1-50 vol% inorganic oxide nanoparticles such as metal sulfides (Col 3, lines 62-64; Col 4, lines 10-15 and lines 36-58). Additionally, the reference teaches IR values of 1.3 to 1.7 (Col 4, line 64). The reference discloses the claimed materials and IR values with sufficient specificity to constitute anticipation. In order to anticipate the claims, the claimed subject matter must be disclosed in the reference with "sufficient specificity to constitute an anticipation under the statute." What constitutes a "sufficient specificity" is fact dependent. If the claims are directed to a narrow range, and the reference teaches a broad range, depending on the other facts of

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the case, it may be reasonable to conclude that the narrow range is not disclosed with "sufficient specificity" to constitute an anticipation of the claims. See, e.g., *Atofina v. Great Lakes Chem. Corp*, 441 F.3d 991, 999, 78 USPQ2d 1417, 1423 (Fed. Cir. 2006).

The reference is anticipatory.

In the event that any minor modifications are necessary to meet the claimed limitations, such as selection of a particular carbonate resin or surface-functionalizing agent, such modifications are well within the purview of the skilled artisan.

Claims 1-5, 9-14, 25, 26, 40-44, 48-53, 65 and 66 are rejected under 35 U.S.C. 102(a)/(e) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over either Kaminsky et al (2004/0233526) or Garito et al (2003/0175004).

As stated in the Rejection mailed 01/26/06, the examiner has determined the instant claims are accorded a priority date of 06/25/03 (the filing date of the instant specification).

Kaminsky discloses an optical element (lenses) comprising a substrate with surface features on a surface thereof having an Ra of from 3 to 200 micrometers containing a dispersion of minute particles having a particle size dimension less than 100 nanometers (Abstract; para 0002, 0011). The reference

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specifically discloses polycarbonates, and the addition of sulfide nanoparticles (which may have surface functionality) to increase refractive index (para 0042, 0058, 0062 and 0074).

Paragraph 0123 discloses polycarbonate/ZnS composites having RI 1.596, 1.598, 1.611, 1.641, 1.657, and 1.675. The reference specifically or inherently meets each of the claimed limitations.

The reference is anticipatory.

In the event that any minor modifications are necessary to meet the claimed limitations, such as selection of a particular carbonate resin or surface-functionalizing agent, such modifications are well within the purview of the skilled artisan.

Garito discloses composite material that includes a host matrix and a plurality of dispersed nanoparticles within the host matrix. Each of the plurality of nanoparticles may include a halogenated outer coating layer that seals the nanoparticle and prevents agglomeration of the nanoparticles within the host matrix (Abstract; para 0114). The reference specifically discloses polycarbonates, and the addition of sulfide nanoparticles (which may have surface functionality) to increase refractive index (para 0064, 0093, 0138, and 0141). Paragraph 0069 discloses a composite having RI 1.6725. The reference

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specifically or inherently meets each of the claimed limitations.

The reference is anticipatory.

In the event that any minor modifications are necessary to meet the claimed limitations, such as selection of a particular carbonate resin or surface-functionalizing agent, such modifications are well within the purview of the skilled artisan.

In view of the foregoing, the above claims have failed to patentably distinguish over the applied art.

The remaining references listed on forms 892 and 1449 have been reviewed by the examiner and are considered to be cumulative to or less material than the prior art references relied upon in the rejection above.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Kopec whose telephone number is (571) 272-1319. The examiner can normally be reached on Monday - Friday from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Douglas McGinty can be reached on (571) 272-1029. The fax phone number for the

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organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Mark Kopec
Primary Examiner
Art Unit 1751

MK

March 25, 2007